Claim Listing

1. (currently amended) A process for the preparation of a sterically hindered amine ether which process comprises reacting a corresponding sterically hindered aminoxide with a C_6 - C_{18} alk-1-ene in the presence of an organic hydroperoxide and subsequently hydrogenating the obtained product.

2. (canceled)

3. (original) A process according to claim **1**, wherein the sterically hindered amine oxide contains at least one group of formula (II)

$$G_3$$
 G_4
 $N-O$
 G_1
 G_2
 G_3
 G_4
 G_2
 G_3
 G_4
 G_2

wherein G_1 , G_2 , G_3 and G_4 are independently alkyl of 1 to 4 carbon atoms or G_1 and G_2 and/or G_3 and G_4 are together tetramethylene or pentamethylene.

4. (currently amended) A process according to claim 1, wherein the obtained sterically hindered amine ether contains at least one group of formula (III)

$$G_3$$
 G_4
 $N-O-E$
 G_1
 G_2
 G_3
 G_4
 G_2
 G_3
 G_4
 G_2

wherein G_1 , G_2 , G_3 and G_4 are independently alkyl of 1 to 4 carbon atoms or G_1 and G_2 and/or G_3 and

G₄ are together tetramethylene or pentamethylene and

E is C_6-C_{18} alkyl C_5-C_{48} alkyl or C_5-C_{48} alk-2-enyl.

- **5.** (previously presented) A process according to claim 3, wherein G_1 and G_3 are methyl and G_2 and G_4 are independently methyl or ethyl.
- **6.** (currently amended) A process according to claim **4**, wherein the sterically hindered amine ether is of formula (A) to (O)

$$O = \begin{array}{c} G_3 G_4 \\ N - O - E \end{array}$$

$$G_1 G_2 \qquad (A)$$

$$G_3$$
 G_4 $N-O-E$ G_1 G_2 G_3

$$\begin{array}{c|c}
G_3 G_4 \\
N-O-E \\
G_1 G_2
\end{array}$$
(C)

$$\begin{bmatrix} G_2 & G_1 & R \\ E & O & N & R_5 \\ G_4 & G_3 & P \\ \end{bmatrix}$$
 (D)

$$G_3$$
 G_4 $N-O-E$ (E)

$$\begin{bmatrix}
G_3 & G_4 \\
G_1 & G_2
\end{bmatrix}_{r}$$
(F)

$$\begin{array}{c|c} & R_{13} \\ & Si \\ & Si \\ & (CH_2)_{k} \\ & H \\ & R_9 \\ & G_1 \\ & G_2 \\ & N \\ & G_4 \\ & O_{E} \\ & X \\ \end{array} \tag{K}$$

$$R_{14} = (CH_2) \frac{R_{13}}{h} = (O) \frac{R_{13}}{d} = (O) \frac{R_{14}}{d} = (CH_2) \frac{R_{14}}{h} = (CH_2) \frac{R_{14}}{h} = (CH_2) \frac{R_{14}}{h} = (CH_2) \frac{R_{13}}{h} = (CH_2) \frac{R_{14}}{h} = (CH_2) \frac{R_{13}}{h} = (CH_2) \frac{R_{13}}{h} = (CH_2) \frac{R_{13}}{h} = (CH_2) \frac{R_{14}}{h} = (CH_2) \frac{R_14}{h} = (CH_2) \frac{R_$$

$$\begin{array}{c|c} & R_{10} & \\ & (CH_2CH_2)_{m} \\ & \\ & G_2 \\ & G_1 \\ & N \\ & G_4 \\ & O \\ & E \\ & Z \\ \end{array} \tag{M}$$

$$R_{16} = \begin{bmatrix} N & (CH_2)_{q} & N & N & R_{17} \\ G_3 & G_4 & G_2 & G_1 & N & G_4 & R_{15} \\ O & O & O & E \end{bmatrix}$$

$$(N)$$

$$R_{30} O$$
 $R_{30} O$
 $R_{30} O$
 $G_{2} G_{1}$
 $G_{3} G_{4}$
 (0)

wherein G_1 , G_2 , G_3 and G_4 are independently alkyl of 1 to 4 carbon atoms or G_1 and G_2 and/or G_3 and G_4 are together tetramethylene or pentamethylene and

E is $\underline{C_6}$ - $\underline{C_{18}}$ alkyl $\underline{C_5}$ - $\underline{C_{48}}$ alkyl or $\underline{C_5}$ - $\underline{C_{48}}$ alk-2-enyl;

m is 0 or 1;

R₁ is hydrogen, hydroxyl or hydroxymethyl;

R₂ is hydrogen, alkyl of 1 to 12 carbon atoms or alkenyl of 2 to 12 carbon atoms;

n is 1 to 4;

when n is 1,

R₃ is hydrogen, alkyl of 1 to 18 carbon atoms, alkoxycarbonylalkylenecarbonyl of 4 to 18 carbon atoms, alkenyl of 2 to 18 carbon atoms, glycidyl, 2,3-dihydroxypropyl, 2-hydroxy or 2-(hydroxymethyl) substituted alkyl of 3 to 12 carbon atoms which alkyl is interrupted by oxygen, an acyl radical of an aliphatic or unsaturated aliphatic carboxylic or carbamic acid containing 2 to 18 carbon atoms, an acyl radical of a cycloaliphatic carboxylic or carbamic acid containing 7 to 12 carbon atoms, or acyl radical of an aromatic acid containing 7 to 15 carbon atoms;

when n is 2,

R₃ is alkylene of 2 to 18 carbon atoms, a divalent acyl radical of an aliphatic or unsaturated aliphatic dicarboxylic or dicarbamic acid containing 2 to 18 carbon atoms, a divalent acyl radical of a cycloaliphatic dicarboxylic or dicarbamic acid containing 7 to 12 carbon atoms, or a divalent acyl radical of an aromatic dicarboxylic acid containing 8 to 15 carbon atoms;

when n is 3,

R₃ is a trivalent acyl radical of an aliphatic or unsaturated aliphatic tricarboxylic acid containing 6 to 18 carbon atoms, or a trivalent acyl radical of an aromatic tricarboxylic acid containing 9 to 15 carbon atoms;

when n is 4,

 R_3 is a tetravalent acyl radical of an aliphatic or unsaturated aliphatic tetracarboxylic acid or R_3 is a tetravalent acyl radical of an aromatic tetracarboxylic acid containing 10 to 18 carbon atoms;

p is 1 to 3,

R₄ is hydrogen, alkyl of 1 to 18 carbon atoms or acyl of 2 to 6 carbon atoms or phenyl;

when p is 1,

R₅ is hydrogen, phenyl, alkyl of 1 to 18 carbon atoms, an acyl radical of an aliphatic or unsaturated aliphatic carboxylic or carbamic acid containing 2 to 18 carbon atoms, an acyl radical of a cycloaliphatic carboxylic or carbamic acid containing 7 to 12 carbon atoms, an acyl radical of an aromatic carboxylic acid containing 7 to 15 carbon atoms, or R₄ and R₅ together are -(CH₂)₅CO-, phthaloyl or a divalent acyl radical of maleic acid;

when p is 2,

R₅ is alkylene of 2 to 12 carbon atoms, a divalent acyl radical of an aliphatic or unsaturated aliphatic dicarboxylic or dicarbamic acid containing 2 to 18 carbon atoms, a divalent acyl radical of a cycloaliphatic dicarboxylic or dicarbamic acid containing 7 to 12 carbon atoms, or a divalent acyl radical of an aromatic dicarboxylic acid containing 8 to 15 carbon atoms;

when p is 3,

R₅ is a trivalent acyl radical of an aliphatic or unsaturated aliphatic tricarboxylic acid containing 6 to 18 carbon atoms, or a trivalent acyl radical of an aromatic tricarboxylic acid containing 9 to 15 carbon atoms;

r is 1 to 4,

when r is 1,

 R_6 is alkoxy of 1 to 18 carbon atoms, alkenyloxy of 2 to 18 carbon atoms, -NHalkyl of 1 to 18 carbon atoms or -N(alkyl)₂ of 2 to 36 carbon atoms,

when r is 2,

 R_6 is alkylenedioxy of 2 to 18 carbon atoms, alkenylenedioxy of 2 to 18 carbon atoms, -NH-alkylene-NH- of 2 to 18 carbon atoms or -N(alkyl)-alkylene-N(alkyl)- of 2 to 18 carbon atoms, or R_6 is 4-methyl-1,3-phenylenediamino,

when r is 3,

R₆ is a trivalent alkoxy radical of a saturated or unsaturated aliphatic triol containing 3 to 18 carbon atoms,

when r is 4,

 R_6 is a tetravalent alkoxy radical of a saturated or unsaturated aliphatic tetraol containing 4 to 18 carbon atoms.

 R_7 and R_8 are independently chlorine, alkoxy of 1 to 18 carbon atoms, -O-T₁, amino substituted by 2-hydroxyethyl, -NH(alkyl) of 1 to 18 carbon atoms, -N(alkyl)T₁ with alkyl of 1 to 18 carbon atoms, or -N(alkyl)₂ of 2 to 36 carbon atoms,

R₉ is oxygen, or R₉ is nitrogen substituted by either hydrogen, alkyl of 1 to 12 carbon atoms or T₁,

 T_1 is

$$G_3$$
 G_4 $N-O-E$ G_1 G_2

R₁₀ is hydrogen or methyl,

q is 2 to 8,

 R_{11} and R_{12} are independently hydrogen or the group T_2 , T_2 is

$$R_2$$
 N
 N
 N
 R_2
 G_3
 G_4
 G_2
 G_3
 G_4
 G_4
 G_5
 G_4
 G_5
 G_7
 G_8
 G_9
 G_9

R₁₃ is hydrogen, phenyl, straight or branched alkyl of 1 to 12 carbon atoms, alkoxy of 1 to 12 carbon atoms, straight or branched alkyl of 1 to 4 carbon atoms substituted by phenyl, cycloalkyl of 5 to 8 carbon atoms, cycloalkenyl of 5 to 8 carbon atoms, alkenyl of 2 to 12 carbon atoms, glycidyl, allyloxy, straight or branched hydroxyalkyl of 1 to 4 carbon atoms, or silyl or silyloxy substituted three times independently by hydrogen, by phenyl, by alkyl of 1 to 4 carbon atoms or by alkoxy of 1 to 4 carbon atoms;

R₁₄ is hydrogen or silyl substituted three times independently by hydrogen, by phenyl, by alkyl of 1 to 4 carbon atoms or by alkoxy of 1 to 4 carbon atoms;

d is 0 or 1;

h is 0 to 4;

k is 0 to 5;

x is 3 to 6;

y is 1 to 10;

z is an integer such that the compound has a molecular weight of 1000 to 4000 amu, e.g. z may befrom the range 3-10;

 R_{15} is morpholino, piperidino, 1-piperizinyl, alkylamino of 1 to 8 carbon atoms, -N(alkyl) T_1 with alkyl of 1 to 8 carbon atoms, or -N(alkyl) $_2$ of 2 to 16 carbon atoms,

 R_{16} is hydrogen, acyl of 2 to 4 carbon atoms, carbamoyl substituted by alkyl of 1 to 4 carbon atoms, s-triazinyl substituted once by chlorine and once by R_{15} , or s-triazinyl substituted twice by R_{15} with the condition that the two R_{15} substituents may be different;

 R_{17} is chlorine, amino substituted by alkyl of 1 to 8 carbon atoms or by T_1 , -N(alkyl) T_1 with alkyl of 1 to 8 carbon atoms, -N(alkyl) $_2$ of 2 to 16 carbon atoms, or the group T_3 ,

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ G_1 & & & \\ & & & \\ G_2 & & & \\ & & &$$

 R_{18} is hydrogen, acyl of 2 to 4 carbon atoms, carbamoyl substituted by alkyl of 1 to 4 carbon atoms, s-triazinyl substituted twice by -N(alkyl)₂ of 2 to 16 carbon atoms or s-triazinyl substituted twice by -N(alkyl)T₁ with alkyl of 1 to 8 carbon atoms;

R₃₀ is hydrogen, alkyl of 1 to 18 carbon atoms, alkoxycarbonylalkylenecarbonyl of 4 to 18 carbon atoms, alkenyl of 2 to 18 carbon atoms, glycidyl, 2,3-dihydroxypropyl, 2-hydroxy or 2-(hydroxymethyl) substituted alkyl of 3 to 12 carbon atoms which alkyl is interrupted by oxygen, an acyl radical of an aliphatic or unsaturated aliphatic carboxylic or carbamic acid containing 2 to 18 carbon atoms, an acyl radical of a cycloaliphatic carboxylic or carbamic acid containing 7 to 12 carbon atoms, or acyl radical of an aromatic acid containing 7 to 15 carbon atoms.

- 7. (currently amended) A process according to claim 1, wherein the $\underline{C_6}$ - $\underline{C_{18}}$ alk-1-ene $\underline{C_5}$ - $\underline{C_{18}}$ alk-1-ene is $\underline{C_6}$ - $\underline{C_{12}}$ alk-1-ene.
- **8.** (original) A process according to claim 1, wherein the reaction is carried out in the presence of a further catalyst.
- **9.** (**original**) A process according to claim **8**, wherein the further catalyst is selected from the group consisting of scandium, titanium, vanadium, chromium, manganese, iron, cobalt, nickel, copper, zinc, gallium, germanium, yttrium, zirconium, niobium, molybdenum, ruthenium, rhodium, palladium, silver, cadmium, indium, tin, antimony, lanthanum, cerium, hafnium, tantalum, tungsten, rhenium, osmium, iridium, platinum, gold, mercury, thallium, lead, bismuth; the compounds thereof; ammonium iodides and phosphonium iodides.
- **10. (original)** A process according to claim **8**, wherein the further catalyst is selected from the group consisting of titanium, vanadium, chromium, manganese, iron, cobalt, nickel, copper, zinc, cerium; the halides and oxides thereof; ammonium iodides and phosphonium iodides.
- **11.** (original) A process according to claim **1**, wherein the organic hydroperoxide contains 3-18 carbon atoms.

- **12.** (currently amended) A process according to claim 1[[2]], wherein the hydrogenation is carried out in the presence of a hydrogenation catalyst.
- **13. (original)** A process according to claim **12**, wherein the hydrogenation catalyst is selected from the group consisting of platinum, palladium, ruthenium, rhodium, Lindlar catalyst, platinum compounds, palladium compounds, ruthenium compounds, rhodium compounds, iridium compounds, nickel compounds, zinc compounds and cobalt compounds.
- 14. (withdrawn) A mixture of sterically hindered amine ethers of formula (Za)

$$E_{10}$$

$$G_{1}$$

$$G_{2}$$

$$G_{3}$$

$$N-O-E_{1}$$

$$G_{2}$$
(Za)

wherein G_1 , G_2 , G_3 and G_4 are independently alkyl of 1 to 4 carbon atoms or G_1 and G_2 and/or G_3 and G_4 are together tetramethylene or pentamethylene;

 E_{10} is a carbon atom which is unsubstituted or substituted by -OH, =O or by one or two organic residues containing in total 1-500 carbon atoms and

E₁ is a mixture of the radicals

$$--C_{-}C_{-}C_{-}C_{-}C_{-}C_{1}$$
 (E_{1a}) and $H_{2}C_{-}C_{-}C_{-}C_{1}$ (E_{1b})

wherein Q₁ is C₂-C₁₅ alkyl;

with the proviso that the mixture of sterically hindered amine ethers is not a mixture of compounds of formula (100) and (101)

$$O-N$$
 (100) $O-N$ (101).

15. (withdrawn/currently amended) A mixture according to claim **14** of sterically hindered amine ethers represented by formulae (A) to (O)

$$O = \underbrace{\begin{array}{c} G_3 G_4 \\ N-O-E_1 \\ G_1 G_2 \end{array}}$$
 (A)

$$R_1 \longrightarrow O \qquad \qquad N-O-E_1 \qquad \qquad (B)$$

$$R_2 \longrightarrow G_1 G_2$$

$$\begin{bmatrix} G_2 & G_1 & R \\ E_1 & O & N & R_4 \\ G_4 & G_3 & P \\ \end{bmatrix}$$
 (D)

$$G_3$$
 G_4 $N-O-E_1$ (E)

$$\begin{array}{c|c} R_7 & G_3 G_4 \\ N & N - O - E_1 \\ R_8 & G_1 G_2 \end{array} \tag{G}$$

$$E_{1} \longrightarrow O - N$$

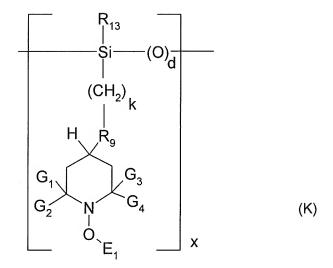
$$G_{1} G_{2}$$

$$R_{9} \longrightarrow N \longrightarrow N \longrightarrow R_{7}$$

$$R_{7} \longrightarrow R_{7}$$

$$R_{10} \longrightarrow R_{10}$$

$$R_{10} \longrightarrow R_{$$



$$R_{14} = (CH_2) \frac{R_{13}}{h} = (O) \frac{R_{13}}{d} = (CH_2) \frac{R_{14}}{h} = R_{14}$$

$$(CH_2) \frac{R_{13}}{h} = (CH_2) \frac{R_{14}}{h} = R_{14}$$

$$(CH_2) \frac{R_{13}}{h} = (CH_2) \frac{R_{14}}{h} = R_{14}$$

$$(CH_2) \frac{R_{13}}{h} = (CH_2) \frac{R_{13}}{h} = R_{14}$$

$$(CH_2) \frac{R_{13}}{h} = (CH_2) \frac{R_{14}}{h} = R_{14}$$

$$(L) \frac{G_1}{G_2} \frac{G_3}{G_4} = (CH_2) \frac{R_{14}}{h} = R_{14}$$

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\$$

$$R_{30} O$$
 $R_{30} O$
 $R_{30} O$
 $G_{2} G_{1}$
 $G_{3} G_{4}$
 (O)

wherein G_1 , G_2 , G_3 and G_4 are independently alkyl of 1 to 4 carbon atoms or G_1 and G_2 and/or G_3 and G_4 are together tetramethylene or pentamethylene;

m is 0 or 1;

R₁ is hydrogen, hydroxyl or hydroxymethyl;

R₂ is hydrogen, alkyl of 1 to 12 carbon atoms or alkenyl of 2 to 12 carbon atoms;

n is 1 to 4;

when n is 1,

R₃ is hydrogen, alkyl of 1 to 18 carbon atoms, alkoxycarbonylalkylenecarbonyl of 4 to 18 carbon atoms, alkenyl of 2 to 18 carbon atoms, glycidyl, 2,3-dihydroxypropyl, 2-hydroxy or 2-(hydroxymethyl) substituted alkyl of 3 to 12 carbon atoms which alkyl is interrupted by oxygen, an acyl radical of an aliphatic or unsaturated aliphatic carboxylic or carbamic acid containing 2 to 18 carbon atoms, an acyl radical of a cycloaliphatic carboxylic or carbamic acid containing 7 to 12 carbon atoms, or acyl radical of an aromatic acid containing 7 to 15 carbon atoms;

when n is 2,

R₃ is alkylene of 2 to 18 carbon atoms, a divalent acyl radical of an aliphatic or unsaturated aliphatic

10/591,778

dicarboxylic or dicarbamic acid containing 2 to 18 carbon atoms, a divalent acyl radical of a cycloaliphatic dicarboxylic or dicarbamic acid containing 7 to 12 carbon atoms, or a divalent acyl radical of an aromatic dicarboxylic acid containing 8 to 15 carbon atoms;

when n is 3,

R₃ is a trivalent acyl radical of an aliphatic or unsaturated aliphatic tricarboxylic acid containing 6 to 18 carbon atoms, or a trivalent acyl radical of an aromatic tricarboxylic acid containing 9 to 15 carbon atoms;

when n is 4,

 R_3 is a tetravalent acyl radical of an aliphatic or unsaturated aliphatic tetracarboxylic acid or R_3 is a tetravalent acyl radical of an aromatic tetracarboxylic acid containing 10 to 18 carbon atoms;

p is 1 to 3,

R₄ is hydrogen, alkyl of 1 to 18 carbon atoms or acyl of 2 to 6 carbon atoms or phenyl;

when p is 1,

R₅ is hydrogen, phenyl, alkyl of 1 to 18 carbon atoms, an acyl radical of an aliphatic or unsaturated aliphatic carboxylic or carbamic acid containing 2 to 18 carbon atoms, an acyl radical of a cycloaliphatic carboxylic or carbamic acid containing 7 to 12 carbon atoms, an acyl radical of an aromatic carboxylic acid containing 7 to 15 carbon atoms, or R₄ and R₅ together are -(CH₂)₅CO-, phthaloyl or a divalent acyl radical of maleic acid;

when p is 2,

R₅ is alkylene of 2 to 12 carbon atoms, a divalent acyl radical of an aliphatic or unsaturated aliphatic dicarboxylic or dicarbamic acid containing 2 to 18 carbon atoms, a divalent acyl radical of a cycloaliphatic dicarboxylic or dicarbamic acid containing 7 to 12 carbon atoms, or a divalent acyl radical of an aromatic dicarboxylic acid containing 8 to 15 carbon atoms;

when p is 3,

R₅ is a trivalent acyl radical of an aliphatic or unsaturated aliphatic tricarboxylic acid containing 6 to 18 carbon atoms, or a trivalent acyl radical of an aromatic tricarboxylic acid containing 9 to 15 carbon atoms;

r is 1 to 4,

when r is 1,

 R_6 is alkoxy of 1 to 18 carbon atoms, alkenyloxy of 2 to 18 carbon atoms, -NHalkyl of 1 to 18 carbon atoms or -N(alkyl)₂ of 2 to 36 carbon atoms,

when r is 2,

 R_6 is alkylenedioxy of 2 to 18 carbon atoms, alkenylenedioxy of 2 to 18 carbon atoms, -NH-alkylene-NH- of 2 to 18 carbon atoms or -N(alkyl)-alkylene-N(alkyl)- of 2 to 18 carbon atoms, or R_6 is 4-methyl-1,3-phenylenediamino,

when r is 3,

R₆ is a trivalent alkoxy radical of a saturated or unsaturated aliphatic triol containing 3 to 18 carbon atoms,

when r is 4,

R₆ is a tetravalent alkoxy radical of a saturated or unsaturated aliphatic tetraol containing 4 to 18 carbon atoms,

 R_7 and R_8 are independently chlorine, alkoxy of 1 to 18 carbon atoms, -O-T₁, amino substituted by 2-hydroxyethyl, -NH(alkyl) of 1 to 18 carbon atoms, -N(alkyl)T₁ with alkyl of 1 to 18 carbon atoms, or -N(alkyl)₂ of 2 to 36 carbon atoms,

 R_9 is oxygen, or R_9 is nitrogen substituted by either hydrogen, alkyl of 1 to 12 carbon atoms or T_1 , T_1 is

$$G_3$$
 G_4 $N-O-E_1$ G_1 G_2

R₁₀ is hydrogen or methyl,

q is 2 to 8,

171

:21

 R_{11} and R_{12} are independently hydrogen or the group T_2 ,

 T_2 is

$$R_2$$
 N
 N
 N
 R_2
 G_3
 G_4
 G_2
 G_4
 G_4
 G_2
 G_4
 G_4
 G_4
 G_4
 G_4
 G_4
 G_4
 G_4
 G_5
 G_4
 G_5
 G_4
 G_5
 G_6
 G_7
 G_8
 G_8
 G_8
 G_8
 G_8
 G_8
 G_9
 G_9

R₁₃ is hydrogen, phenyl, straight or branched alkyl of 1 to 12 carbon atoms, alkoxy of 1 to 12 carbon atoms, straight or branched alkyl of 1 to 4 carbon atoms substituted by phenyl, cycloalkyl of 5 to 8 carbon atoms, cycloalkenyl of 5 to 8 carbon atoms, alkenyl of 2 to 12 carbon atoms, glycidyl, allyloxy, straight or branched hydroxyalkyl of 1 to 4 carbon atoms, or silyl or silyloxy substituted three times independently by hydrogen, by phenyl, by alkyl of 1 to 4 carbon atoms or by alkoxy of 1 to 4 carbon atoms;

R₁₄ is hydrogen or silyl substituted three times independently by hydrogen, by phenyl, by alkyl of 1 to 4 carbon atoms or by alkoxy of 1 to 4 carbon atoms;

d is 0 or 1;

h is 0 to 4;

k is 0 to 5;

x is 3 to 6;

y is 1 to 10;

z is an integer such that the compound has a molecular weight of 1000 to 4000 amu, e.g. z may be from the range 3-10;

 R_{15} is morpholino, piperidino, 1-piperizinyl, alkylamino of 1 to 8 carbon atoms, -N(alkyl) T_1 with alkyl of 1 to 8 carbon atoms, or -N(alkyl) $_2$ of 2 to 16 carbon atoms,

 R_{16} is hydrogen, acyl of 2 to 4 carbon atoms, carbamoyl substituted by alkyl of 1 to 4 carbon atoms, s-triazinyl substituted once by chlorine and once by R_{15} , or s-triazinyl substituted twice by R_{15} with the condition that the two R_{15} substituents may be different;

 R_{17} is chlorine, amino substituted by alkyl of 1 to 8 carbon atoms or by T_1 , -N(alkyl) T_1 with alkyl of 1 to 8 carbon atoms, -N(alkyl) T_1 of 2 to 16 carbon atoms, or the group T_3 ,

$$G_1$$
 G_2 G_3 G_4 G_4

 R_{18} is hydrogen, acyl of 2 to 4 carbon atoms, carbamoyl substituted by alkyl of 1 to 4 carbon atoms, s-triazinyl substituted twice by -N(alkyl)₂ of 2 to 16 carbon atoms or s-triazinyl substituted twice by -N(alkyl)T₁ with alkyl of 1 to 8 carbon atoms;

R₃₀ is hydrogen, alkyl of 1 to 18 carbon atoms, alkoxycarbonylalkylenecarbonyl of 4 to 18 carbon atoms, alkenyl of 2 to 18 carbon atoms, glycidyl, 2,3-dihydroxypropyl, 2-hydroxy or 2-(hydroxymethyl) substituted alkyl of 3 to 12 carbon atoms which alkyl is interrupted by oxygen, an acyl radical of an aliphatic or unsaturated aliphatic carboxylic or carbamic acid containing 2 to 18 carbon atoms, an acyl radical of a cycloaliphatic carboxylic or carbamic acid containing 7 to 12 carbon atoms, or acyl radical of an aromatic acid containing 7 to 15 carbon atoms.

16. (withdrawn) A mixture of sterically hindered amine ethers containing at least one group of formula (Y)

$$G_3 \qquad G_4 \qquad \qquad (Y)$$

$$G_1 \qquad G_2 \qquad \qquad (Y)$$

wherein G_1 , G_2 , G_3 and G_4 are independently alkyl of 1 to 4 carbon atoms or G_1 and G_2 and/or G_3 and G_4 are together tetramethylene or pentamethylene and

E₂ is a mixture of the radicals

$$H_2$$
 H_2 H_2 H_3 H_3 H_4 H_5 H_5

wherein Q₁ is C₂-C₁₅ alkyl.

17. (withdrawn/currently amended) A mixture according to claim **16** of sterically hindered amine ethers represented by formulae (A) to (O)

$$O = \begin{pmatrix} G_3 & G_4 \\ N - O - E_2 & (A) \end{pmatrix}$$

$$R_{1} \longrightarrow O \qquad N-O-E_{2} \qquad (B)$$

$$R_{2} \longrightarrow G_{1} G_{2}$$

$$R_3 = \begin{bmatrix} G_3 & G_4 & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & &$$

$$\begin{bmatrix} G_2 & G_1 & R \\ E_2 & O & N & R_4 \\ G_4 & G_3 & P \end{bmatrix}$$
 (D)

$$G_3G_4$$
 $N-O-E_2$ (E)

$$\begin{array}{c|c}
G_3 G_4 \\
\hline
O \\
N-O-E_2 \\
G_1 G_2
\end{array}$$
(F)

$$E_{2} = O - N$$

$$G_{1} G_{2}$$

$$R_{9} = N$$

$$N = N$$

$$N = N$$

$$R_{7} = N$$

$$R_{7} = N$$

$$R_{7} = N$$

$$R_{7} = N$$

$$R_{10} = N$$

$$R$$

$$\begin{array}{c|c}
R_{13} \\
Si \\
CH_{2}) \\
k \\
H \\
R_{9} \\
G_{1} \\
G_{2} \\
N \\
G_{4} \\
O \\
E_{0}
\end{array}$$
(K)

$$R_{14} = (CH_2) \frac{R_{13}}{h} (O) \frac{R_{13}}{d} (O) \frac{R_{14}}{d} (CH_2) \frac{R_{14}}{h} R_{14}$$

$$(CH_2) \frac{R_{14}}{h} R_{14}$$

$$(CH_2) \frac{R_{13}}{h} R_{14}$$

$$(CH_2) \frac{R_{14}}{h} R_{14}$$

$$(L) \frac{G_1}{G_2} \frac{G_3}{N} \frac{G_4}{G_4}$$

$$(L) \frac{G_1}{G_2} \frac{G_3}{N} \frac{G_4}{G_4}$$

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\$$

$$R_{16} = \begin{bmatrix} N & (CH_2) & N & N & R_{17} \\ G_3 & G_4 & R_{15} \\ O & O & C_2 \end{bmatrix}$$

$$CH_2 = \begin{bmatrix} G_1 & G_2 & N & N & N \\ G_2 & G_1 & N & G_4 & R_{15} \\ O & O & C_2 & C_4 & C_5 \end{bmatrix}$$

$$CH_2 = \begin{bmatrix} G_1 & G_2 & N & R_{15} \\ O & O & C_5 \\ O & O & C_5 \end{bmatrix}$$

$$CH_2 = \begin{bmatrix} G_1 & G_2 & N & R_{15} \\ O & O & C_5 \\ O & O & C_5 \end{bmatrix}$$

$$CH_2 = \begin{bmatrix} G_1 & G_2 & N & R_{15} \\ O & O & C_5 \\ O & O & C_5 \end{bmatrix}$$

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$$CH_2 = \begin{bmatrix} G_1 & G_2 & N & R_{15} \\ O & O & C_5 \\ O & O \\ O & O & C_5 \\ O & O \\$$

$$R_{30} O$$
 $R_{30} O$
 $R_{30} O$
 $G_{2} G_{1}$
 $G_{3} G_{4}$
 (O)

wherein G_1 , G_2 , G_3 and G_4 are independently alkyl of 1 to 4 carbon atoms or G_1 and G_2 and/or G_3 and G_4 are together tetramethylene or pentamethylene;

m is 0 or 1;

R₁ is hydrogen, hydroxyl or hydroxymethyl;

R₂ is hydrogen, alkyl of 1 to 12 carbon atoms or alkenyl of 2 to 12 carbon atoms;

n is 1 to 4;

when n is 1,

R₃ is hydrogen, alkyl of 1 to 18 carbon atoms, alkoxycarbonylalkylenecarbonyl of 4 to 18 carbon atoms, alkenyl of 2 to 18 carbon atoms, glycidyl, 2,3-dihydroxypropyl, 2-hydroxy or 2-(hydroxymethyl) substituted alkyl of 3 to 12 carbon atoms which alkyl is interrupted by oxygen, an acyl radical of an aliphatic or unsaturated aliphatic carboxylic or carbamic acid containing 2 to 18 carbon atoms, an acyl radical of a cycloaliphatic carboxylic or carbamic acid containing 7 to 12 carbon atoms, or acyl radical of an aromatic acid containing 7 to 15 carbon atoms;

when n is 2,

R₃ is alkylene of 2 to 18 carbon atoms, a divalent acyl radical of an aliphatic or unsaturated aliphatic dicarboxylic or dicarbamic acid containing 2 to 18 carbon atoms, a divalent acyl radical of a cycloaliphatic dicarboxylic or dicarbamic acid containing 7 to 12 carbon atoms, or a divalent acyl radical of an aromatic dicarboxylic acid containing 8 to 15 carbon atoms;

when n is 3,

R₃ is a trivalent acyl radical of an aliphatic or unsaturated aliphatic tricarboxylic acid containing 6 to 18 carbon atoms, or a trivalent acyl radical of an aromatic tricarboxylic acid containing 9 to 15 carbon atoms;

when n is 4,

R₃ is a tetravalent acyl radical of an aliphatic or unsaturated aliphatic tetracarboxylic acid or R₃ is a tetravalent acyl radical of an aromatic tetracarboxylic acid containing 10 to 18 carbon atoms;

p is 1 to 3,

R₄ is hydrogen, alkyl of 1 to 18 carbon atoms or acyl of 2 to 6 carbon atoms or phenyl;

when p is 1,

R₅ is hydrogen, phenyl, alkyl of 1 to 18 carbon atoms, an acyl radical of an aliphatic or unsaturated aliphatic carboxylic or carbamic acid containing 2 to 18 carbon atoms, an acyl radical of a cycloaliphatic carboxylic or carbamic acid containing 7 to 12 carbon atoms, an acyl radical of an aromatic carboxylic acid containing 7 to 15 carbon atoms, or R₄ and R₅ together are -(CH₂)₅CO-, phthaloyl or a divalent acyl radical of maleic acid;

when p is 2,

R₅ is alkylene of 2 to 12 carbon atoms, a divalent acyl radical of an aliphatic or unsaturated aliphatic dicarboxylic or dicarbamic acid containing 2 to 18 carbon atoms, a divalent acyl radical of a cycloaliphatic dicarboxylic or dicarbamic acid containing 7 to 12 carbon atoms, or a divalent acyl radical of an aromatic dicarboxylic acid containing 8 to 15 carbon atoms;

when p is 3,

R₅ is a trivalent acyl radical of an aliphatic or unsaturated aliphatic tricarboxylic acid containing 6 to 18 carbon atoms, or a trivalent acyl radical of an aromatic tricarboxylic acid containing 9 to 15 carbon atoms;

r is 1 to 4,

when r is 1,

 R_6 is alkoxy of 1 to 18 carbon atoms, alkenyloxy of 2 to 18 carbon atoms, -NHalkyl of 1 to 18 carbon atoms or -N(alkyl)₂ of 2 to 36 carbon atoms,

when r is 2,

 R_6 is alkylenedioxy of 2 to 18 carbon atoms, alkenylenedioxy of 2 to 18 carbon atoms, -NH-alkylene-NH- of 2 to 18 carbon atoms or -N(alkyl)-alkylene-N(alkyl)- of 2 to 18 carbon atoms, or R_6 is 4-methyl-1,3-phenylenediamino,

when r is 3,

R₆ is a trivalent alkoxy radical of a saturated or unsaturated aliphatic triol containing 3 to 18 carbon atoms,

when r is 4,

 R_6 is a tetravalent alkoxy radical of a saturated or unsaturated aliphatic tetraol containing 4 to 18 carbon atoms,

 R_7 and R_8 are independently chlorine, alkoxy of 1 to 18 carbon atoms, -O-T₁, amino substituted by 2-hydroxyethyl, -NH(alkyl) of 1 to 18 carbon atoms, -N(alkyl)T₁ with alkyl of 1 to 18 carbon atoms, or -N(alkyl)₂ of 2 to 36 carbon atoms,

 R_9 is oxygen, or R_9 is nitrogen substituted by either hydrogen, alkyl of 1 to 12 carbon atoms or T_1 ,

T₁ is

$$G_3$$
 G_4 $N-O-E_2$ G_1 G_2

R₁₀ is hydrogen or methyl,

q is 2 to 8,

 $R_{11}\, and\, R_{12}$ are independently hydrogen or the group $T_2,$

 T_2 is

$$R_2$$
 N
 N
 N
 R_2
 G_3
 G_4
 G_2
 G_4
 G_4

R₁₃ is hydrogen, phenyl, straight or branched alkyl of 1 to 12 carbon atoms, alkoxy of 1 to 12 carbon atoms, straight or branched alkyl of 1 to 4 carbon atoms substituted by phenyl, cycloalkyl of 5 to 8 carbon atoms, cycloalkenyl of 5 to 8 carbon atoms, alkenyl of 2 to 12 carbon atoms, glycidyl, allyloxy, straight or branched hydroxyalkyl of 1 to 4 carbon atoms, or silyl or silyloxy substituted three times independently by hydrogen, by phenyl, by alkyl of 1 to 4 carbon atoms or by alkoxy of 1 to 4 carbon atoms;

R₁₄ is hydrogen or silyl substituted three times independently by hydrogen, by phenyl, by alkyl of 1 to 4 carbon atoms or by alkoxy of 1 to 4 carbon atoms;

d is 0 or 1;

h is 0 to 4;

k is 0 to 5;

x is 3 to 6;

y is 1 to 10;

z is an integer such that the compound has a molecular weight of 1000 to 4000 amu, e.g. z may be from the range 3-10;

 R_{15} is morpholino, piperidino, 1-piperizinyl, alkylamino of 1 to 8 carbon atoms, -N(alkyl) T_1 with alkyl of

1 to 8 carbon atoms, or -N(alkyl)₂ of 2 to 16 carbon atoms,

 R_{16} is hydrogen, acyl of 2 to 4 carbon atoms, carbamoyl substituted by alkyl of 1 to 4 carbon atoms, s-triazinyl substituted once by chlorine and once by R_{15} , or s-triazinyl substituted twice by R_{15} with the condition that the two R_{15} substituents may be different;

 R_{17} is chlorine, amino substituted by alkyl of 1 to 8 carbon atoms or by T_1 , -N(alkyl) T_1 with alkyl of 1 to 8 carbon atoms, -N(alkyl) T_1 of 2 to 16 carbon atoms, or the group T_3 ,

$$G_1$$
 G_2 G_3 G_4 G_4

 R_{18} is hydrogen, acyl of 2 to 4 carbon atoms, carbamoyl substituted by alkyl of 1 to 4 carbon atoms, s-triazinyl substituted twice by -N(alkyl)₂ of 2 to 16 carbon atoms or s-triazinyl substituted twice by -N(alkyl)T₁ with alkyl of 1 to 8 carbon atoms;

R₃₀ is hydrogen, alkyl of 1 to 18 carbon atoms, alkoxycarbonylalkylenecarbonyl of 4 to 18 carbon atoms, alkenyl of 2 to 18 carbon atoms, glycidyl, 2,3-dihydroxypropyl, 2-hydroxy or 2-(hydroxymethyl) substituted alkyl of 3 to 12 carbon atoms which alkyl is interrupted by oxygen, an acyl radical of an aliphatic or unsaturated aliphatic carboxylic or carbamic acid containing 2 to 18 carbon atoms, an acyl radical of a cycloaliphatic carboxylic or carbamic acid containing 7 to 12 carbon atoms, or acyl radical of an aromatic acid containing 7 to 15 carbon atoms.

18. (withdrawn) A mixture according to claim **14**, wherein the ratio E_{1a}:E_{1b} is from 1:9 to 7:3.

- **19. (withdrawn)** A process for flame retarding an organic material or stabilizing an organic material against degradation by light, oxygen and/or heat, which process comprises applying to or incorporating into said material a mixture of sterically hindered amine ethers as defined in claim **14**.
- 20. (withdrawn) A composition comprising
- A) an organic material which is sensitive to oxidative, thermal and/or actinic degradation, and B) at least one mixture of sterically hindered amine ethers as defined in claim 14.
- 21. (withdrawn) A composition according to claim 20, comprising further additives.
- **22. (withdrawn)** A composition according to claim **21**, comprising as further additives antioxidants, UV-absorbers, light stabilizers, metal deactivators, phosphites, phosphonites, hydroxylamines, nitrones, thiosynergists, peroxide scavengers, basic co-stabilizers, nucleating agents, fillers, reinforcing agents, benzofuranones, indolinones and/or flameproofing agents.